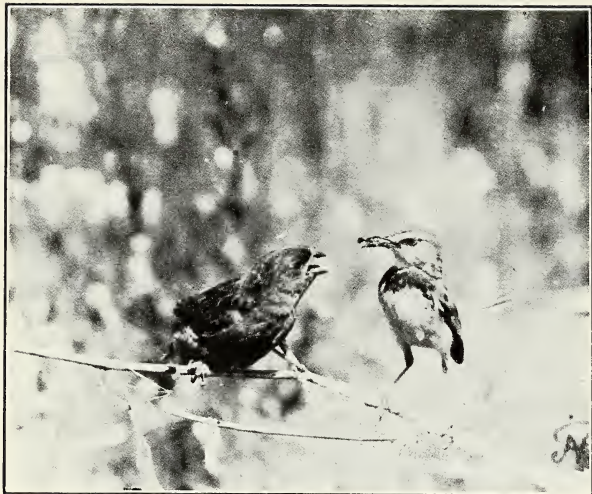




Young *Anomalospiza* being fed by *Prinia fluvicans* (see pp. 260-261).

ORNITHOLOGICAL NOTES.

By AUSTIN ROBERTS.

Classification of African Birds.

As adopted by Mr. C. H. B. GRANT in a series of papers published in the *Ibis*, 1915.

IN the course of a series of papers dealing with a collection of birds made by Captain G. P. Cosens in British East Africa and Uganda (*Ibis*, 1915), Mr. C. H. B. Grant has in many cases reviewed the races of species with which the collection is concerned. Since Grant has been largely identified with the study of South African species, which he collected during the Rudd Expedition, and as his present work has been carried out with the aid of the enormous series of skins in the National Collection in the British Museum, his expressions of opinion are likely to carry considerable weight. Nevertheless, I am sure by the facts in regard to the species with which I am here concerned, that his identification has not been conducted with that care and discrimination which should be correlated with his dogmatic assertions in regard to some subspecies and even species. Grant's work is characterized by many good features for which African ornithologists should be grateful, amongst which may be mentioned the first acknowledgment as well as careful scrutiny, from workers in the British Museum, of the older literature prior to 1766 in which African ornithology has been dealt with, and also the acceptance of the modern rules of nomenclature; these are particularly good features, as the inclination of many ornithologists

is to retain the out-of-date nomenclature to be found in the "Catalogue of Birds in the British Museum," or, of another school, in Reichenow's works on the ornithology of Africa. It is therefore a great pity that it becomes necessary to indicate that the same careful scrutiny has not been applied to all the races and even some species of African birds. I note also with regret that Grant has not touched upon the generic status of species, an important matter which it is to be hoped will soon be investigated.

In dealing with *Otus capensis*, Grant writes as follows (p. 253):—"There appears to be three phases of plumage of this bird: 1st, grey, that which might be designated the normal; 2nd, a rufous phase (cf. Selater, *Ibis*, 1912, p. 5); and 3rd, a slatey-grey phase.

"Messrs. Gunning and Roberts, in the *Annals of the Transvaal Museum*, Vol. III, 1911, p. 111, describe three new subspecies of this owl as follows:

Pisorhina capensis intermedia: Modderfontein,* Transvaal.

Pisorhina capensis grisea: Bethulie, Orange Free State.

Pisorhina capensis pusilla: Boror, Portuguese East Africa.

"The series in the National Collection shows that great individual variation occurs in this owl, and I cannot see any constant character sufficiently well marked to warrant separation into races, and therefore, without more convincing proof, I must place Gunning and Roberts' names as synonyms."

In the first place, I presume Grant means by "phase," shades of colour arising as stages in the age of adult individuals. If my interpretation of the phrase is correct, then Grant is decidedly wrong, for amongst those in the Transvaal Museum Collection the characters given in the diagnoses are constant and readily distinguishable; the differences are due neither to age nor season, but to the climatic conditions of the normal habitat of the species. A few specimens acquired since these subspecies were described in every case support my first conclusion, with one exception, that of the juvenile specimen from Matatiele. Lieut. C. G. Davies has kindly presented to the Museum an adult specimen from Matatiele, which proves to be that of "*grisea*"; but as the juvenile specimen still retains part of its downy plumage, and the young are naturally not necessarily coloured like the adults, this does not affect the status of the races. There are in the collection twenty specimens of this owl from the following localities:—

Otus capensis capensis.

2 Grahamstown.

Otus capensis intermedia.

13 Transvaal.

Otus capensis grisea.

1 Bethulie, O.F.S.; 1 ad., 1 juv., Matatiele, East Griqualand.

Otus capensis pusilla.

2 Boror; 1 Beira.

* The type is from Pretoria, as stated in the original description.—A.R.

Sclater's remarks upon the size and plumage of the specimens Grant collected at Klein Letaba and Beira (to which Grant draws attention in support of his statement that the colour is merely a "phase") shows that those specimens were probably referable to "*intermedia*" and "*pusilla*" respectively. Every one to whom I have shown these specimens in the Transvaal Museum has concurred in my opinion that they should be recognized as well-marked races. Grant has not, moreover, indicated where the "series in the National Collection" were obtained; but it is natural to conclude from his free use of the term "British East Africa" in an ambiguous sense in several instances, and from his statement at p. 253 that the two specimens from the Nakwai Hills are both in good clean plumage and agree perfectly with specimens from "South Africa," that he has not found it convenient to take into account the different zoological zones found within such large tracts of country as "South Africa," "British East Africa," "German East Africa," etc. When classifying this and other birds with which I am here concerned, it is a pity that Grant did not bear in mind a rule which he himself acknowledges in regard to the classification of subspecies, for I find at p. 260 the following remarks in regard to *Poicephalus meyeri*: "Though these parrots vary to a considerable amount individually and no single character of a single specimen can be fixed down, yet when examined collectively and the series laid out geographically, average differences exist which preclude all these parrots being placed under one name. Therefore, six of the described races are recognizable, and (perhaps unfortunately) I have been compelled to describe a seventh." Exactly so; but it so happens that in the case of the owls it is possible to allocate a *single* specimen to a certain race, and a series is not required to justify the separation. It seems clear, however, that there is not a large series of these owls from South Africa in the National Collection, otherwise Grant would have done as he has done in other cases, given short diagnoses of the subspecies instead of merely mentioning their names and distribution. Under the circumstances, I think I am justified in taking exception to his unwarranted action in rejecting the names of the well-marked South African subspecies.

At p. 271, Grant makes the following statements in regard to *Lophoceros nasutus nasutus*:—"The range of this race appears to extend from Senegal to the Niger, eastwards to north-east Africa and south to British East Africa; its place in Damaraland and Nyasaland, southward to the Vaal River, is taken by *L. n. epirhinus* Sund."

"In the *Journ. für Orn.*, 1905, p. 440, Erlanger separates the Arabian and north Abyssinian bird under the name of *L. n. forskallii* Hempr. and Ehr. . . . and certainly two ♂ specimens before me from south Arabia have larger bills and are generally larger than specimens of true *L. n. nasutus*. However, one ♂ from Geragi, White Nile, is identical in every way with the Arabian birds: so until further material comes to hand it cannot be definitely settled as to how far this name can hold good.

"Since the above has been written, I have seen the description of *Lophoceros nasutus maraisi* Roberts . . . which is similar in size and colour to *L. n. nasutus*, but smaller,* having a wing in the ♂ of 202 mm.

* Though I am half Irish, I am not responsible for this "bull."—A. R.

There are no specimens in the British Museum from German East Africa, and Dr. Hartert has kindly informed me that the Tring Museum does not possess any either.

"As this race has been founded principally on size, I append for comparative purposes the wing measurements of all the adult ♂♂ in the British Museum Collection :—Gambia, 221 ; Portuguese Guinea, 221, 218 ; Gold Coast Colony, 229, 222, 219, 214 ; Nigeria, 222, 197 ; Welle River, 223 ; Bahr-el-Ghazal, 219, 216 ; Sudan, 250, 234, 230, 222, 223, 219 ; Abyssinia, 238, 227, 226, 221, 219 ; South Arabia, 251, 235 ; Uganda, 223, 222 ; British East Africa, 229, 228, 223, 222 ; Nyasaland, 209, 208, 206 ; Zambesi, 226, 221, 212, 200 ; Mashonaland, 234, 222, 214, 211, 208 ; Damaraland, 225, 222, 219 ; Bechuanaland, 237 ; Transvaal, 224, 218, 213, 211.

"It will be seen that considerable variation exists in size in birds from the same locality, as, for instance, the two from Nigeria, the six from Sudan, and the four from the Zambesi ; specimens from the first and last localities overlapping Mr. Austin Roberts' measurements."

At first sight these figures seem to be convincing ; but upon closer scrutiny it becomes apparent that too much has been made again of political areas, and no definite localities are quoted. The question of exact localities is an important one, but not the only one to be considered. It will be observed that there is a mean around which the majority of figures are clustered, and it will be noted in the figures I shall give hereafter, that the South African males in the collection of the Transvaal Museum vary also ; but in every case where the length falls short of the average, the bill, though black at the tip, still shows by the development of the casque that the specimen has not reached maturity. Grant's record of very large specimens from Mashonaland and Bechuanaland seems to show that a large race of "*epirhinus*" occurs there. Grant has quite overlooked the possibility of the existence of a large and a small species side by side, such as, for instance, *Cinnyris afer* and *C. chalybeus*, which species may again vary in size in different localities. I had this in mind after noting the peculiar distribution of these supposed races of *Lophoceros nasutus*, and particularly drew attention to this when describing "*maraisi*," as, if their ranges are found to overlap, then the subspecies must be considered to be true species. The character on which "*nasutus*" is separated from "*epirhinus*," the shape of the casque, appears to me to be of specific, if not indeed generic, value, and I was curious before, and am still more so now, to know whether intermediates between the two alleged races are known. Grant unfortunately makes no remark upon the shape of the casque, and we must therefore conclude that the Nyasaland birds, whose "locality" is not far removed from that of the types of "*maraisi*" and whose measurements come very near to those of "*maraisi*," are referable to "*epirhinus*" on the shape of the casque. As "*maraisi*," which has the casque shaped as in "*nasutus*," occurs in the more southeasterly parts of German East Africa, there seems to be no reason why it should not also occur in the Zambesi valley, there being no obstacles to its extension so far south. It would therefore be well to examine specimens from the Zambesi valley more carefully to see if both forms do not occur

there side by side. I trust that if an answer is forthcoming to this problem of distribution, measurements of the bill and tail, if not also other parts, will be given, for those of the wing alone do not afford an altogether satisfactory guide. Mr. C. H. B. Grant is misleading in stating that the difference lay in the wing alone. The two specimens on which "*maraisi*" was described are both old ones, as is shown by the development of the bill, yet in every respect they are much smaller than the average "*nasutus*."

Measurements of *Lophoceros nasutus epirhinus*.

Locality.	Sex.	Wing.	Tail.	Culmen.	Shape and Colour of Bill.
Hectorspruit.....	♂	218	184	83	Casque developed, tip of bill black.
"	♂	218	198	84	" "
"	♂	219	196	82.5	" "
"	♂	205	190	66	Casque not developed, tip of bill red.
"	(♀ or juv.)	197	172+	70	" "
Pretoria.....	♂	228	208	88.5	Casque developed, tip of bill black.
"	♂	223	195	87	" "
Rustenburg.....	♂ (juv.)	210	191	75	Casque not developed, tip of bill black.
Zoutpansburg.....	♂	225	197	88	Casque developed, tip of bill black.
"	♂ (juv.)	212	192	71	Casque not developed, tip of bill black.
Jabwielu, south-eastern Rhodesia	♂ (juv.)	203	182	69	Casque not developed, tip of bill turning black.
Lusakas, north-western Rhodesia	?	205	188	70.5	Casque not developed, tip of bill red.

At p. 273, Grant places *Lophoceros damarensis* in the synonymy of *L. erythrorhynchus caffer*,* stating that, in his opinion, the types are albinistic individuals. This is not the case, for there are four specimens of this bird in the Transvaal Museum taken at Windhuk, Damaraland, which agree perfectly with Shelley's description. This bird is apparently not a subspecies of *L. erythrorhynchus*, but more likely a very distinct species, and it is surely the height of arbitrary procedure to reject it on no better grounds than conjecture.

At p. 283, Grant assumes, probably correctly, that the type of *Irrisor erythrorhynchus* was procured at Knysna and that *I. viridis* from east of the Sunday River is a synonym. The fauna of the two districts is seldom identical, owing to the great difference in climatic conditions, and I was therefore not surprised on examining the series in the collection of the Transvaal Museum to find that the sexed ♂♂ from Knysna were smaller than those from Grahamstown and elsewhere east of the Sunday River; but it is only fair to state that the only other specimens are one sexed as a ♀ and another not sexed, so that it is possible the two sexed as ♂♂ may

* The correct name is *L. erythrorhynchus rufirostris* Sund,

also have been ♀♀, though Marais, who collected these specimens, was always very careful in his sexing. It remains, therefore, to be seen whether this difference in size is constant. Grant doubts Shortridge's and Davies's records of "*viridis*" from Pondoland, stating that he would not be surprised to find that the specimens would turn out to be *I. e. marwitzi*. Shortridge's specimens I have not seen, but Davies's from Flagstaff are certainly referable to "*viridis*." A single specimen from Port St. Johns District, taken by Swinny, is much smaller than even juvenile specimens from Grahamstown; it is sexed as a ♂, and I have no doubt from a knowledge of the conscientious work of this naturalist, and the general smallness of birds from Pondoland, that this is correct. A small race may therefore be found near the coast in Pondoland.

At p. 285, Grant makes the following statement:—" *Irrisor erythrorhynchus marwitzi* Reichw., *Orn. Monatsb.*, 1906, p. 171: Makalama in the Wemberesteppe, German East Africa.

"Of this, *Irrisor erythrorhynchus brevirostris* Gunn. and Rob. (*Annals of the Transvaal Museum*, Vol. III, p. 113: Villa Pereira, Boror, Portuguese East Africa; see also *Journ. S.A. Orn. Union*, Vol. VIII, 1912, p. 26 becomes a synonym, as birds from Portuguese East Africa agree perfectly with specimens from the north and south, and the bill is *not* shorter."

The range he gives as: "Natal, Swaziland, Transvaal, Portuguese East Africa, Matabeleland, Mashonaland, Nyasaland, Northern Rhodesia, Belgian Congo (Dikulwe Valley), German East Africa (Mombasa to Rift Valley), Uganda up to the Turkwel River, island of Zanzibar."

At p. 281, he records a ♂ specimen from Amala River, 200 miles north from the type locality of "*marwitzi*," and a ♀ from Turkwel River, still another 200 miles further north; all three localities are on different river systems, an important detail where these birds are concerned, owing to their frequenting heavily wooded places such as are commonly distributed along river banks. I mention this because the measurements he records of these two specimens show that the ♂ has a long wing and a short bill and the ♀ a long bill and a short wing, and unless we take account of such differences we lose sight of the main object of trinomial classification. It is this want of appreciation of details which concern geographical distribution which has caused Grant to reject the name of "*brevirostris*." If it is possible to separate Meyer's parrot only by the study of *series* of specimens, why should not the same trouble be taken in regard to these Hoopoes, which present more clearly defined characters on which they can be separated? I am not aware on what grounds Grant states that the bill of "*brevirostris*" is *not* shorter; but the series in the Transvaal Museum Collection certainly shows this to be wrong. In the table of measurements given hereafter of the specimens in the collection before me, it will be seen that both the wing and tail, besides the bill, are shorter in specimens from the Zambesi valley than in those from the Transvaal, while they approximate to those of the eastern parts of the Cape Province. This I noted before and therefore compared the race with "*viridis*," stating that the bill was *stouter* and *straighter*. Specimens from the Transvaal appear to come nearer to *I. e. angolensis* than to *I. e. marwitzi*, to judge by Grant's short diagnoses. The prismatic colours of these birds are not easily

defined, and every naturalist probably has his own conception of what is meant by "violet colour" (Reichenow), "purple" (Grant), and "bronze violet" (mihi), colours which have been ascribed to the tail of this bird. I can, however, see a very distinct difference in the colour of the tail feathers of specimens from the Cape Province, from the Transvaal, and from the Zambesi valley, and as this is correlated with differences in size, I see no reason to consider those from the last two regions as synonymous merely because the extent of the white on the primary coverts is the same.

Table of Measurements of *Irrisor erythrorhynchus*.

LOCALITY.	MALES.			FEMALES.		
	Wing.	Tail.	Culmen.	Wing.	Tail.	Culmen.
Knysna.....	131	159+	43	131	151+	41
"	132	133+(m)	41	(not sexed) 130	160	39
Grahamstown.....	135	187	55	132	164	47
"	137	153+	59	135	163	44
"	139	160+	52	137	169	44
"	140	162+	55	(sex ?) 137	166	43
"	(juv.) 129	156	?	(juv.) 131	157+	42
Bedford, Cape Province	134+(m)	?	57	136	164	47
Flagstaff.....	139	167	52	133	146+	48
Port St. Johns.....	125	146	47	—	—	—
Redhill, Natal.....	137+	171	59	—	—	—
Louws Creek, Transvaal	147	202+	61	141	196	44
Hectorspruit.....	145	227+	61	139	160+	47
"	153	232	62	—	—	—
"	146	227	56	—	—	—
"	(sexed ♀) 150	220+	60	—	—	—
"	(sexed ♀) 145	203+(m)	56	—	—	—
Thabana River.....	156	238	58	142	170+	44
Koedoes River.....	150	213+	54	—	—	—
Klein Letaba.....	151	222	56	—	—	—
"	157	197+	52	—	—	—
"	151	227	52	—	—	—
Goud River.....	148	222+	55	142	170+	44
"	—	—	—	147	220+	45
Rietspruit.....	—	—	—	145	216	44
Moorddrift.....	159	235	59	149	220+	?
Rustenburg.....	159	232+	57	139	221+	43
"	158	235	53	—	—	—
"	(sexed ♀) 148	217+	56	—	—	—
"	(juv.) 149	210+	50	(juv.) 138	?	40
Warmbaths, Pretoria..	156	232	64	—	—	—
"	153	177+	44	—	—	—
Beira.....	137	225	49	(not sexed) 134	214	36
"	—	—	—	(not sexed) 132	204	37
Boror.....	142	200+	44	127	192+	38

NOTE.—The specimens marked juvenile all have the bill black. These long-tailed birds soon wear down the tips of the tail feathers, and when worn I have added a + sign. Some of the specimens are in moult, and in such cases I have indicated this by the sign +(m). Some of the specimens I have put into the column other than that in which they would have been placed had the labels been trusted to entirely; it is not unusual to observe errors in the sexing of specimens and to make allowance therefor, as, for instance, Grant has done so at pp. 239 and 242.

At p. 290, Grant rejects my name of *Rhinopomastus cyanomelas intermedius* in the following terms:—"Since writing the above I have seen Roberts' description in the *Annals of the Transvaal Museum*, Vol. IV, p. 171, of *Rhinopomastus cyanomelas intermedius*, the type locality being given as Koedoes River, Zoutpansberg District, north-eastern Transvaal. The characters on which it is founded are the length of the tail, i.e. ♂♂ 165-155, ♀♀ 146-136 mm., and 'less white on the tail feathers.'

"Another careful examination of the large series in the British Museum Collection shows that the white on the tail, though constantly greater in *R. c. schalowi* when compared with specimens of *R. c. cyanomelas*, varies quite considerably individually and, moreover, in series from the same districts, as is exemplified in British East African and Uganda specimens.

"The measurements of the tails gave the following results: Manda Island, ♂ 148 mm.; Uganda, ♂ 165-147, ♀ 171-151 mm.; British East Africa, ♂ 176-163, ♀ 156-137 mm.; German East Africa, ♂ 166, ♀ 151 mm.; North-Eastern Rhodesia, ♂ 175-174 mm.; Nyasaland, ♂ 185-172, ♀ 163 mm.; Portuguese East Africa, ♂ 183-168, ♀ 158-146 mm.; Lower Zambesi, ♂ 175-168, ♀ 167 mm.; Eastern Matabeleland, ♂ 167-146, ♀ 164-161 mm.; Mashonaland, ♂ 187-162, ♀ 167 mm.; Eastern Transvaal (low country), ♀ 144 mm.

"Neumann, *Journ. für Orn.* op. cit., gives the measurements of the tail of four specimens from German East Africa: ♂♂ 205 and 180, ♀♀ 175 and 168.

"The above list shows not only that great individual latitude must be allowed, but that Roberts' measurements are very closely matched in birds from German East Africa and are actually equalled by those from Uganda, thus compelling me to place his name as a synonym."

While I admit that a certain amount of latitude must be allowed, as indeed the figures I gave will show, yet there must be something wrong in the measurements quoted by Grant for specimens from Uganda and eastern Matabeleland, where it will be seen in the case of the former that the ♀♀ are on the average larger than the ♂♂ and in the latter approximately the same. He seems to have made no allowance for errors in sexing, for the condition of the tail feathers, nor for the exact localities from which the specimens were obtained. I have already pointed out the necessity for closely observing these points, and it is not necessary to repeat them. I may point out, however, that the female specimen from near the type locality of *R. c. intermedius* which he records, falls within the minimum and maximum figures for the sex which I gave. *Rhinopomastus cyanomelas intermedius*, it will be seen on consulting the table of measurements given hereafter, is a distinct link between the typical and East African races. Specimens we have from German East Africa and Boror agree with Neumann's figures, and for this reason, and on comparison of the series in the collection with these specimens, I came to the conclusion (which I still see no reason to alter) that the specimens from the low country of the eastern Transvaal should be named.

Table of Measurements of *Rhinopomastus cyanomelas*.

LOCALITY.	MALES.			FEMALES.		
	Wing.	Tail.	Culmen.	Wing.	Tail.	Culmen.
Windhuk, Damaraland	111	132	47	100	121	40
Okahandja, "	115	129	46.5	—	—	—
" "	(juv.) 110	128	34	—	—	—
Barkly West, C.P.	111	?	45	107	121	40.5
Brandfort, O.F.S.	115	135	50	103	120	37
Bloemfontein, O.F.S.	110	131	47	—	—	—
Rustenburg, Transvaal	113	141	50	—	—	—
" "	(sexed ♀) 112	126	49	—	—	—
Matlabas, Waterberg..	—	—	—	103	122	39
Rietsspruit, " ..	118	145	46	—	—	—
" " " "	(sexed ♀) 112	126	46	—	—	—
Pongola River.....	112	130	48	103	116	37.5
Moorddrift.....	—	—	—	101	121	42
Pienaars River.....	111	132	49	105	121	42
" " " " " "	119	135	52	—	—	—
Marabastad.....	111	145	42	—	—	—
Blaauwberg.....	115	134	48	104	120	36
" " " " " "	(juv.) 111	140	39	105	125	34
Koedoes River.....	114	165	50	105	136	40
Thabina River.....	114	155	47	—	—	—
Mapagone.....	118	151	49	—	—	—
Hectorspruit.....	114	157	45	106	146	37
" " " " " "	—	—	—	104	135	39
" " " " " "	—	—	—	103	138	37
Louws Creek.....	112	155	45	(juv.) 105	105	29
" " " " " "	(sexed ♀) 113	164	46	—	—	—
Weenen, Natal.....	—	—	—	(juv.) 100	137	39
Beira, P.E.A.....	117	176	46	—	—	—
Boror, P.E.A.....	113	182	42	—	—	—
" " " " " "	111	185	45	—	—	—
Bagamojo, G.E.A.....	—	—	—	(juv.) 101	150+	34.5
Mero Forest, G.E.A....	117	180	45	106	152	32

At p. 303, Grant states that the typical *Caprimulgus natalensis* occurs only in Natal and Zululand, and I may therefore here record a specimen from Zoutpansberg, collected by the late J. v. O. Marais.

At p. 304, Grant retains the name of *C. natalensis chadensis*, not because there is a recognizable difference between the alleged races, but because a gap of 2000 miles separates the places where the types were obtained! Why then has he not given a new name to the short-tailed specimens of *Rhinopomastus cyanomelas* from Uganda?

At p. 440 Grant refers to *Tricholaema affinis* as a distinct species, having apparently overlooked the correction made by Neumann (*Journ. für Orn.*, 1910, p. 197), in which he pointed out that this supposed species represents the immature plumage of *T. leucomelan*.

At p. 428, Grant rejects the name of *Centropus pygmi*, mihi, on the assumption that it represents the young of *C. burchelli*; but as he has not

seen the specimens vindication is unnecessary. The fact that the two species are both found in Kaffraria counts for nothing, since *C. superciliosus* and *C. burchelli* are said to occur side by side north of the Zambesi.

At p. 421, Grant has indicated two errors on my part in the following terms:—"Attention must be drawn to the fact that Mr. Austin Roberts recently recorded a pair of *Centropus grilli caeruleiceps* from Sabi, eastern Transvaal (cf. *Annals of the Transvaal Museum*, Vol. IV, 1914, p. 175); considerable confusion is entailed by taking a name, and that only a subspecific (geographical) one, from north-east Africa and fixing it on to a South African bird, thus defeating the laws governing geographical forms, and creating unnecessary synonyms.

"Mr. Roberts has remarked that the ♀ differs from the ♂ in being *banded*; this is, of course, the character of the young and immature birds. When adult the sexes can only be distinguished by the female being slightly larger and not by the markings, as is shown by nine sexed birds in the British Museum Collection from Natal and Nyasaland in black and rufous plumage, six of which are ♀♀ and three ♂♂."

Perhaps it is as well that I stated the ♀ was banded, as we now know what is the difference between the sexes when adult, as Grant has carefully pointed out, a difference in size pointed out by me, which has apparently previously been missed; while Grant himself states that the type of *Centropus grilli caeruleiceps* is "very closely matched by a bird from Port Natal." Why then all this furore? As a matter of fact the paragraph reflects upon the work of Grant's colleague, for whom it was apparently not intended, as I find at p. 286, in dealing with the single specimen on which Grant founds his name of *Irrisor erythrorhynchus ruwenzorae*, he states that: "In the *Trans. Zool. Soc.*, Vol. XIX, 1910, p. 432, Mr. Ogilvie-Grant has recorded this specimen as *I. viridis* Licht." It cannot therefore be said that I am the only sinner in recording a race incorrectly, more especially having regard to the fact that Ogilvie-Grant himself stated nine years previously that *Irrisor viridis* is confined to the Cape Colony. It is surely a graver mistake to describe a new race of *Centropus grilli* on a single immature specimen, as he has done at p. 420, when, as he admits, adult specimens are not available from the type locality; would it not have been better to have recorded this specimen as *Centropus grilli caeruleiceps*, seeing that it so closely matches the type? What would he have said had I described the Sabi specimens as a new race? And had he rejected it, he would have been justified in doing so only on the grounds that the "phases" of plumage are not well known enough to warrant the separation of the species into races. Moreover, Grant is himself not above reproach in the "creation of unnecessary synonyms," as, for example, in his rejection of species, such as *Lophoceros damarensis* and subspecies of which he has not seen the specimens or series on which they were founded, or, if he has seen them, has neglected to examine them with proper care. I am puzzled as to what Grant means by "laws governing geographical forms." Has he discovered the laws by which forms vary geographically? If so, why has he not published his views thereon, for this important question has not yet been satisfactorily answered. But I fear, judging by his work, that he referred to some unwritten custom which he is now

attempting to make law, in the same way as a now passing school of binomialists has attempted to make binomialism law. Thinking systematists are not likely to accept a rule governing the geographical range of a subspecies, if that is the intention of Grant's expression, for the range must be defined only by the recognizability of the character on which the form is named. Herein Grant has taken advantage of the vagueness of the limits of the range of subspecies, to describe, retain or reject geographical races with a dogmatic bias that is neither scientific nor courteous. Doubtless Grant has his views as to what constitutes a genus, a species, or a subspecies; but it does not follow that his opinion is that of the majority. An examination of some of his work, which I have been able to undertake seems to show that at times he has compromised between the system of the binomialists and that of the modern trinomialists, for while he rejects some subspecies, in other cases, such as in dealing with Meyer's parrot, he has applied the finest degree of refinement in trinomial classification. Making due allowance for the variability or non-variability of species, a factor which should never be lost sight of in classification, no system will stand which is not consistently applied, and herein we have had much to contend with in all works on African ornithology. It seems almost as though the enormous series in the National Collection, where most of this work has been done, have been too large, for the examination of details has been greatly neglected and workers seem not to have had time to go carefully through the whole series.

In conclusion, I may state that any one is justified in correcting errors of judgment, which no human being can claim to be free from, and no unbiassed systematist will take offence thereat; but such corrections must be backed by facts and not subjected to the feeling influence of association. Sufficient has been said to indicate the principles which have prompted the penning of this paper.

New Records of Birds.

LIEUT. C. G. DAVIES, S.A. Mounted Riflemen, has recently kindly presented to the Transvaal Museum several specimens of birds collected at Otavifontein, Damaraland, during the recent military operations. These represent *Chelicutia chelicuti* (Stanl.), *Vinago calva* (Temm.), and *Francolinus hartlaubi* Boc. Special interest is attached to the two last species as they are new to the South African avifauna. The specimen of *Vinago calva* has a very short bill, the hardened apical portion measuring only 10.5 mm., and therefore shorter than Reichenow's minimum measurements. In coloration it agrees with Reichenow's description of *V. calva nudirostris*, which has been placed in the synonymy of *V. calva calva* by Grant and Bannerman (cf. *Ibis*, 1915, pp. 37 and 482). The specimens of *Francolinus* represent a ♂ and ♀. The former agrees with the description, except in having a somewhat longer wing; spurs are not present, but represented by two hard knobs on each leg, and it may therefore not be fully adult. The ♀ agrees with Reichenow's description of a young ♀; but Davies assures me that it was fully adult, and we may therefore conclude that Reichenow was in error in ascribing this plumage to the young ♀ only. Very little appears to be known of this bird.

New Species and Subspecies.

Spinus symonsi, spec. nov.*

♂. The whole top of the head and nape olive-yellow, with dark brown streaks down the centre of each feather; a broad line above the lores extending backwards over the fore part of the eye citron-yellow, this colour becoming lost gradually posteriorly towards the nape; sides and back of the neck like the top of the head, but less distinctly streaked; on the lower hind neck this colour merges into that of the back and scapulars, which are "walnut-brown"; feathers of the rump like the back, but the lower ones tipped with yellowish; upper tail-coverts dark grey, with the margins lighter grey; greater, median and lesser wing-coverts brown, with broad yellowish margins; primaries and their coverts brown, the former for the basal two-thirds, and the latter for the whole extent, narrowly margined externally with very light grey; secondaries and their coverts brown, with broad, light grey margins to and around the tips; tail feathers dark brown above, narrowly margined with light grey, the outermost with a broad white mark, broadest at the tip, extending along the centre of the inner web for the terminal third, the last part for about 10 mm. being white right across the inner web; the next tail feather also with a white mark, which is shorter, however, and does not extend to the outer margin except at the tip; chin greyish with a tinge of yellow; centre of throat uniform citron yellow, merging on the sides into the colour of the neck and below much tinged with olive-greenish, but retaining a more or less well defined tract of yellow in the middle line of the breast to the abdomen, where the yellow merges into white; the sides of the breast and flanks tinged with olive-brown; under tail-coverts brown at the base but otherwise white; thighs light-grey to white; under surface of the wings lighter than above, with pale inner margins; under wing-coverts olive-yellow.

Type: ♂, Sangebetu Valley, Basutoland, presented by R. E. Symons, Esq. Length of wing 76 mm., tail 57, tarsus 15, culmen 11.

♀. Differs from the ♂ in having no yellow in the plumage, this being displaced by white, the throat with short streaks on the centre of the feathers, and the underparts, except the abdomen and under tail-coverts, drab-grey. Measurements the same as those of the ♂.

The Transvaal Museum is indebted to Mr. Symons for a series consisting of three pairs of this bird and a clutch of its eggs. It appears from Mr. Symons' account to be quite common on the Drakensberg. There is also a juvenile specimen of this bird in the collection, taken by Lieut. C. G. Davies at Matatiele in February, 1912, which I was previously unable to identify in the absence of adults; this specimen has the characteristic markings on the tail feathers, and the general coloration of the adult ♀♀, but is more streaked above and below.

Mr. Symons writes as follows in regard to this bird:—"Mr. Barnes, who is assisting me here on the Giant's Castle Game Reserve, first called my attention to the above birds during the winter of 1914, when they

* First described in a separate slip: supplement to Vol. V, No. 3, issued January, 1916.

came down here in large numbers from the Drakensberg. On my last trip to Basutoland I succeeded in shooting the two birds which I sent you. Mr. Barnes, who returned here yesterday from patrolling the Drakensberg on the Basutoland side, brought back three clutches of the eggs of the Siskin, and also a fine clutch of the orange-breasted Rock Jumper, and made the following notes on the nests and eggs:—1st November, 1915: Found nest in a tuft of grass on the edge of a krantz, in shape like that of the Cape Canary (*Serinus canicollis*), built of grass and lined with horsehair; it contained three eggs, white or very pale blue, sparingly spotted with reddish-brown. 2nd November: Found nest with three fairly fresh eggs; the nest was built like the previous one, in the shelter of a tuft of grass; the eggs are also of the same colour. On the same date another nest was found containing one egg, which was added to by one on each of the following two days; they were like the others, but rather different in shape.”

Mr. Symons adds:—“These birds are nesting in great numbers on the Drakensberg just now, and it would be easy to get ten or twelve clutches of their eggs. They are found at altitudes between 8,000 and 10,000 ft.; they are wonderful songsters and may be heard from sunrise to sunset.” The clutch sent to the Transvaal Museum may be described as being of a very pale bluish-white colour, sparingly spotted and slightly streaked, mainly at the thicker end, with varying shades of brown and purplish slate, and measure respectively 17.3×13.3 , 17.1×13.5 , and 17.8×13.5 mm.

Mirafr africanoides harei, subsp. nov. —

Differs from *M. africanoides africanoides* in being altogether paler and the streaks above narrower and less conspicuous.

Type: ♂, T.M. No. B 7505, Windhuk, Damaraland, March, 1910, ex collection C. Wilde. “Iris hazel; total length 157 mm.” Length of wing 91, tail 65, tarsus 21.5, culmen 13.5 mm. Also a ♀ from same locality taken in July of the same year: “total length 148 mm.”; wing 86, tail 60, tarsus 21, culmen 13.

A series of skins from the Transvaal seems to show that these are typical of the species; but Shelley has assigned the type locality to Hopetown, south of the Orange River, and a pair of birds collected by Mr. H. L. Hare at Barkly West may therefore be nearer the typical colour; they are much more richly coloured than those from the Transvaal, and it was my original intention to describe them as another race, but I have decided to leave the matter in abeyance for the present. The Damaraland birds are very readily distinguishable from those from both the Transvaal and Barkly West.

Phyllastrephus terrestris rhodesiae, subsp. nov.

A pale form, much paler than *P. terrestris suahelicus* from the lower Zambesi.

Type: ♂, T.M. No. B 3515, Machile River, North-Western Rhodesia, 12th September, 1907, ex collection C. Wilde. “Iris light-brown, bill and feet grey; total length 220 mm.” Wing 90, tail 100, tarsus 22, culmen 24.

The Transvaal Museum Collection contains a series of skins from the type locality as well as from various localities in northern Bechuanaland. Four races of this species are represented in the collection, namely:—

<i>Phyllastrephus terrestris terrestris</i> ,	Cape and Natal.
„	„ <i>intermedius</i> , Delagoa Bay.
„	„ <i>suahelicus</i> , Lower Zambesi.
„	„ <i>rhodesiae</i> , Upper Zambesi.

Andropadus importunus noomei, subsp. nov.

Differs from *A. importunus importunus* in having a distinct wash of yellow on the abdomen.

Type: ♂, T.M. No. B 7804, Haenertsburg, north-eastern Transvaal, 5th December, 1909, *ex* collection F. O. Noome. Wing 88 mm., tail 85, tarsus 24, culmen 16.

Also a series of skins from the same place and the neighbouring forests.

Two specimens of *Andropadus* from the neighbourhood of Delagoa Bay have the underparts yellow, more or less clouded with olive-green on the chest. Peters obtained the type of his *Andropadus oleaginus* at Delagoa Bay, and these two specimens would therefore appear to be topotypical. A single specimen from Zimbiti, Beira, is of an altogether brighter yellow and appears to be referable to *A. insularis*. The southern birds should therefore be recognized as *A. insularis oleaginus* Ptrs.

Parasitism amongst Finches.

(Read before the Transvaal Biological Society, 27th January, 1916.)

FROM time to time in the *Journal of the South African Ornithologists' Union* I have referred to the parasitic habits of the Pin-tailed Widow Bird (*Vidua serena*), and am positive from my numerous observations that this bird never builds its own nest, but deposits its eggs in the nest of some other bird, by whom they are incubated and the young birds reared. I have known it to leave its eggs in the nest of four species of Finches, these being the Common Waxbill (*Estrilda astrild*), Dufresne's Waxbill (*Coccygia dufresnei*), Ruddy Waxbill (*Lagonosticta rubricata*), and the Red-collared Widow Bird (*Coliuspasser ardens*), the first three of which are smaller and the last rather larger than the Pin-tailed Widow Bird. It frequently deposits more than one egg in a nest, and I have known the whole clutch to be replaced by those of the parasite. Unlike the Cuckoos and Honeyguides, this bird does not, when hatched, eject the young of the host, but instead, the parent parasite when depositing its eggs in a nest appears to destroy one of those of the host to make room for her own, and the young birds grow up together. There has been no direct corroborative evidence as to these observations; but various quite different types of nest have been ascribed to this bird, and we may safely assume that these nests were either wrongly identified, or that the young birds which were seen in them were parasitic on the owners of the nests. Mr. Frank Bolus also recorded an incident which he observed in the Cape District: a hen of the Pin-tailed Widow Bird was observed seated on the ground apparently in difficulties, and on his approaching it, it flew away

and left a white egg on the ground ; the measurements given of this egg agree with those of the species taken from various birds' nests and now in the collection of the Transvaal Museum. Some importance may be attached to the last incident, since Cuckoos are known to lay their eggs on the ground and subsequently to carry them in their beaks to the nest in which they are to be deposited in the absence of the parents.

In a recent paper on "Egg-collecting in the Bushveld," in the *Journal of the South African Ornithologists' Union*, Vol. IX, p. 36, I mentioned some cases which seemed to indicate that Rendall's Seedeater (*Anomalospiza imberbis*) might also be parasitic. I have just obtained proof that my supposition was correct. On Sunday last (24th January, 1916), I searched for a nest of a pair of Black-chested Wren Warblers (*Prinia flavicans*), which had been observed for some days to be very busy carrying grubs and insects to a nest somewhere in my garden. The nest was discovered and to my delight was found to contain a young Rendall's Seedeater. During the day I showed the nest and bird to quite a number of friends and relations, but for fear of scaring the birds too much, we did not do more than peep carefully into it ; the young bird filled the whole of the bottom of the woven nest, and this accounts for overlooking the presence of a young warbler as well, which must have been hidden under it, of which more anon. On the following morning a telegram was dispatched to my brother at Johannesburg, to come over as soon as possible with his apparatus to photograph the birds ; this he was unable to do until late on Wednesday afternoon (26th), and to my dismay on Wednesday morning I discovered that the young had left the nest. I spent about an hour in trying to find them and was at last rewarded, after watching the movements of the old birds, by flushing first a young *Prinia*, which I guessed must have been hidden under the parasite, and I did not therefore follow it, and then, not a yard farther on, the young parasite. Both birds were then caught and put into an extemporized cage, and the old birds were soon seen to feed them. In the afternoon my brother arrived and the young birds were transferred to a canary cage, which was put close to a disguised tent in which my brother took up a post with the camera. The young Wren Warbler managed to wriggle through the bars of the cage and to fly away repeatedly at first, but was always caught and put back again, until at the last it was so blown by its exertions that it remained quietly on the bottom of the cage, as shown in the photographs ; just after the last plate had been used, it hopped on to the perch alongside the parasite. The Seedeater proved to be more amenable to handling and soon settled on a perch where it could easily take food through the bars from its foster parents, and a number of fairly good photographs were taken ; but light was rapidly failing and the last was taken just before sunset. Its demands for food were incessant when all was quiet after I had retired, and the foster parents fed it on an average of about once a minute. Next day was clear and scorchingly hot ; but undismayed by the discomfort of having to sit in the sweltering heat of the tiny tent, my brother remained at his post nearly all the morning and secured an excellent set of photographs, on which he is to be congratulated. The Seedeater seemed to be so tame that we decided to take no more photographs of it in the cage,

but to put it outside on a stick. This had its disadvantages, as the foster parents continually led it away and we frequently had some difficulty in tracing it, as my brother was shut up inside the tent and I had to stand some way off so as not to scare the old birds; but we always succeeded in finding it by watching the movements of the foster parents or listening for its chirping. The young Wren Warbler was not so tame and as soon as we put it on a stick it would fly away and eventually we lost sight of it; even while this young bird was some distance from the tent, its parents seldom troubled to feed it, preferring to satisfy the incessant demands of their fosterling. After the second set of half-dozen plates had been used in photographing the parasite as it was being fed by the Wren Warblers, a photograph was taken of the nest, the bird being put into the nest but refusing to stay there and being then "snapped" as it was half-way out. In putting the bird into the nest, I found that there was still an addled egg of the Wren Warblers in it, which I had previously overlooked. An incident which occurred on Wednesday evening while my brother was fixing up the camera inside the tent is worth recording. The parent Wren Warblers were much concerned and fussed about amongst the weeds a few yards off, and while I was watching them I noticed a finch settle on a tree some thirty yards away, which looked like an adult Rendall's Seedeater, though I could not make sure on account of the failing light; while I was watching it and telling my brother that I thought one of the parents of the young Seedeater was watching us, the Wren Warblers also caught sight of it, and instantly flew at it with every evidence of rage, driving it away and following it for fully a hundred yards. This occurrence is not, as some might suppose, evidence that the parent was there to feed the young one, since it has been noted that Cuckoos and Honeyguides sometimes visit their offspring; but they appear to be prompted to do so more out of curiosity than an affection for, or intention of feeding, their young.

I may here mention that the adult Black-chested Wren Warblers are indistinguishable in colour, and young ones which I have seen in Pretoria have a very distinct band across the chest, even when the tail is as yet only half-grown, but the band is not as broad as that of the adults nor so clearly defined. I note this because some specimens we have from Damaraland, taken in October, appear to be quite adult and yet have only a row of contiguous spots across the chest.

My brother once expressed an opinion that *Quelea sanguinirostris lathamii* was also possibly parasitic;* and I may state that I was also of that opinion, though doubtful in the absence of definite proof. My reason for thinking so was that at Potchefstroom, where this bird was very common, a most assiduous search and inquiry failed to throw any light upon its breeding habits. Some time later, however, Mr. F. O. Noome informed me that he had seen thousands of old nests in the northern Transvaal, and there was a clutch of eggs in the Transvaal Museum Collection, presented by Mr. R. Duncan, which had been laid by the birds in captivity and indisputably belonged to this bird. In the *Union Agricultural Journal* for April, 1911, I was careful therefore to state that nothing definite was

* Cf. *Journ. S.A. Orn. Un.*, Vol. V, p. 23.

known of its breeding habits, but that it was supposed to be parasitic ; this called for an interesting private letter (which was published in a later number of the same journal) from a gentleman residing at Halesowen in the Cape Province, in which he stated that this bird had once visited that district in great numbers and nested in hundreds in a plantation ; this was in April, and after the birds had reared their young they disappeared and did not return.

In writing a paper on " Egg-collecting in the Bushveld " (*loc. cit.* p. 33), I mentioned the finding of a nest of *Ploceus auricapillus* (= *Hyphantornis tahatali* A. Sm.), which had been deserted and which contained three uniform greenish-blue eggs, which I thought might possibly be those of *Quelea*. About the time when this paper was being published, however, that is, in August, 1913, while on a hunting trip with Mr. F. O. Noome in the Matibi District of South-Eastern Rhodesia, we came across thousands of old nests that could hardly have been those of any species but the *Quelea*, which was frequently there to be seen in scores—or even in hundreds—of thousands in single flocks. These nests were placed in tall thorn trees scattered about amongst the mopani trees over an area covering many miles in circumference ; the trees were so well protected by tangled thorns, that the local Tschangaans had gone to the trouble in many cases of chopping down the trees in order to get the young birds. On inquiring from the natives as to the species which had built the nests and the season when they were to be found breeding, Noome's, and by this time my own, conclusion was confirmed, for they stated that the nests were built by the birds which were then to be found in huge flocks and that their breeding season was at the end of summer (about April) ; they also pointed to very distinct but disused tracks leading from tree to tree, which they said had been made by carnivorous animals, even lions, which were in the habit of patrolling the place when the birds were breeding, in order to pick up any young ones which might fall to the ground. The nests were rough, globular, woven structures with little, if any, lining. This repeated evidence of the real nesting habits of this bird leaves no doubt as to its not being normally a parasite, and the explanation of the birds not being found breeding at Potchefstroom seems to be that they repair to some wilder part of the country towards the end of the summer to breed. What species the eggs mentioned by my brother and me may be referred to, still puzzles me. Either the *Quelea* may at times depart from its usual custom and make use of the nest of some other bird, or the eggs may have been those of some other parasite—possibly *Anomalospiza imberbis*.
